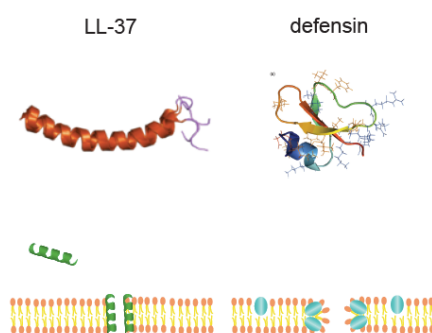




Postdoc project: Synergistic effects between immune peptides



Background

Antimicrobial peptides (AMP) are small molecules (< 10 kDa) that our body produces right after it is infected by pathogens such as viruses and bacteria. They are the common weapons against different types of pathogens as the first line of defense (innate immunity). There are tens of kinds of AMPs in our bodies and their expression level is different in each organ. The current center of debate is why there are so many different kinds of AMPs and how that is linked to their diverse functions? Recently, synergistic effects between 2 types of AMPs have been reported, where bacteria die only when 2 types of AMPs are mixed. However, its mechanism is unknown.

Goal of the project

To understand the mechanism of AMP synergistic effects, we study the interaction between AMP mixtures and cell membranes by methods in physical chemistry; electrochemical impedance spectroscopy (EIS), single channel measurements, fluorescence spectroscopy, circular dichroism (CD), quartz crystal microbalance (QCM), atomic force microscopy (AFM) etc.

Qualification

Prerequisites are PhD in fields such as physics, chemistry and biochemistry. The position offers a full employment. Highly-motivated students who are interested in pursuing a research career would be encouraged to apply. Starting date is early 2018. **The selection procedure starts as soon as we received qualified candidates till the position is filled.**

How to apply

The project is for a postdoc. For general information, please visit our website <http://www.unige.ch/sciences/chifi/sugiharalab/>. If you would like to apply, please send an application including (1) Motivation letter, (2) Your complete CV, (3) Full contact information of two professional references with phone and email. The entire application material should be sent as a single email to kaori.sugihara@unige.ch.